

Activity: All Mixed Up!



Name: _____

Alg. 1 H - Date: Oct. 27

Glue this foldable on page 78

Directions: Fill in the table or write a let statement for each problem. Write the equation. Then solve for the problems #2, 5, 6, & 8 pages 79 & 80.

1. Bicyclists, Sadie and Gavin started at noon from points 60 km apart and rode toward each other, meeting at 1:30 P.M. Gavin's speed was 4 km/hr greater than Sadie's speed. Find their speed.

	Rate	Time	Distance
Sadie	x	1.5	$= 1.5x$
Gavin	$x + 4$	1.5	$= 1.5(x + 4)$

Equation: $1.5x + 1.5(x + 4) = 60$

2. Jack and Olivia started from the same point at the same time. They traveled in opposite directions on their bicycles. Jack traveled at the rate of 9 miles per hour, and Olivia traveled at 11 miles per hour. After how many hours were they 60 miles apart?

	Rate	Time	Distance
Jack	9	x	$= 9x$
Olivia	11	x	$= 11x$

Equation: $9x + 11x = 60$

3. Two trains leaving at the same time at different stations, which is 900 km apart. The rate of the fast train exceeded the rate of the slow train by 20 km/h. At the end of $3\frac{1}{2}$ hours, the trains were still 200 km apart. Find the rate of each train.

	Rate	Time	Distance
Slow Train	x	3.5	$= 3.5x$
Fast Train	$x+20$	3.5	$= 3.5(x+20)$

Equation: $200 + 3.5x + 3.5(x+20) = 900$

4. Chris is 6 years older than Destiny. Six years ago, Chris was twice as old as Destiny. How old is each now?

	Present Age	Past - 6
Chris <i>old</i>	$x+6$	$x+6-6 = x$
Destiny <i>young</i>	x	$x-6$

$2(\text{young}) = \text{old}$
Equation: $2(x-6) = x$

5. The sum of the ages of Abby and Giovanna is 32. In two years Abby will be three times as old as Giovanna. How old are they now?

	Present Age	Future + 2
Abby <i>old</i>	x	$\rightarrow x+2$
Giovanna <i>young</i>	$32-x$	$\rightarrow 32-x+2 = 34-x$

$3(\text{young}) = \text{old}$
Equation: $3(34-x) = x+2$

6. Convert: 88 inches per second into miles per day.

7. The larger of two numbers is 5 less than twice the smaller. Their sum is 43. Find the numbers.

Let smaller # = x

larger # = $2x-5$

Equation: $x + (2x-5) = 43$

8. Tylih has \$2.05 in her purse made up of nickels, dimes, and quarters. There are two times as many nickels than quarters, and four more dimes than nickels. How many coins of each kind are there?

Type of coin	Value of each coin in cents	# of coins	total
Nickels	5	$2x = 5(2x)$	
Dimes	10	$2x+4 = 10(2x+4)$	
Quarters	25	$x = 25x$	

Equation: $5(2x) + 10(2x+4) + 25x = 205$

9. Find two consecutive even integers such that 4 times the lesser is 28 more than the greater.

Let 1st CEI = x

2nd CEI = $x+2$

Equation: $4x = (x+2) + 28$

10. The length of a rectangle is 5 less than three times the width. If the length is increased by 8 inches and the width is decreased by 2 inches, a new rectangle is formed whose perimeter is 98 inches. Find the dimensions of the original rectangle. p. 79